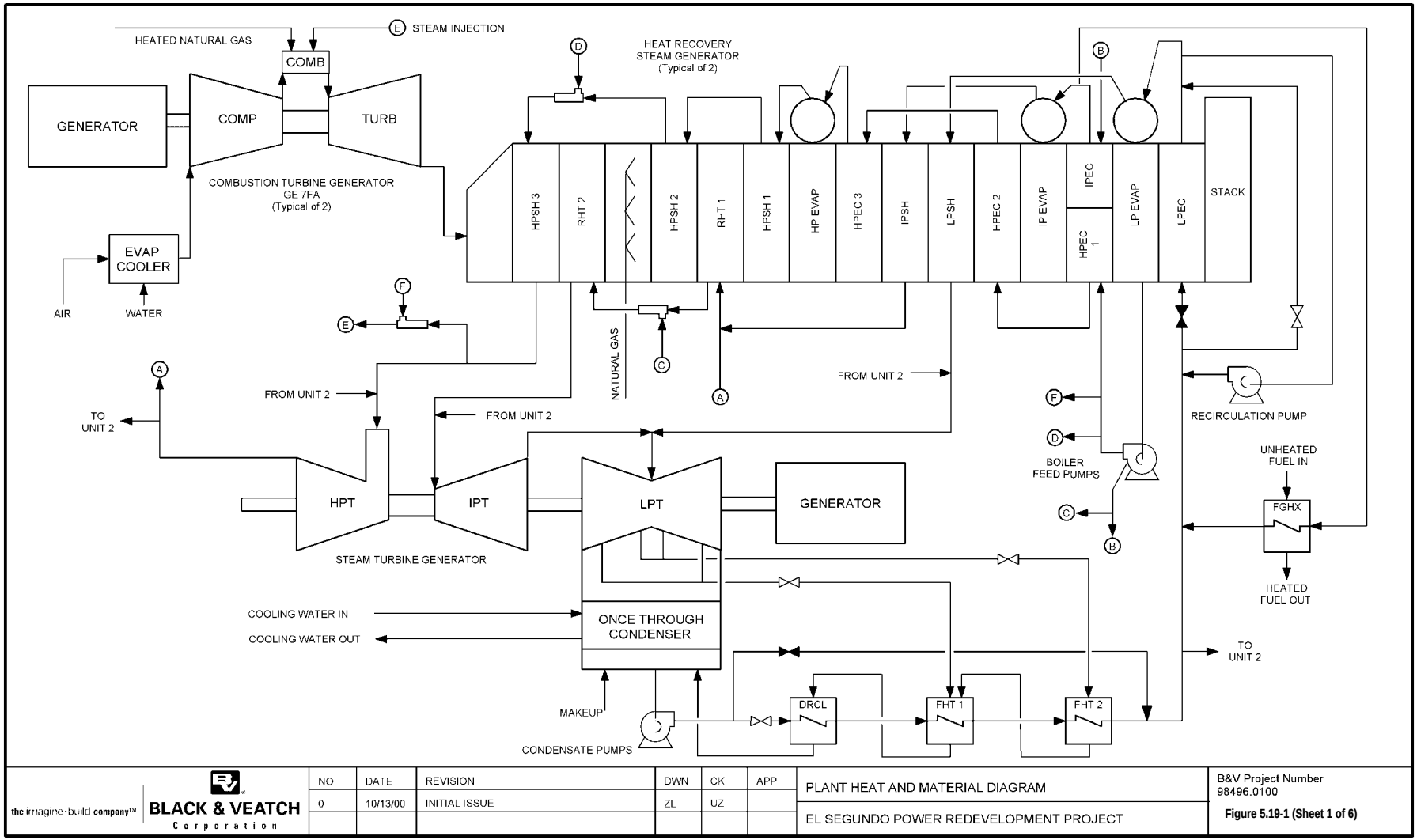
ATTACHMENT 7
DATA REQUEST NO. 19

FIGURE 5.19-1
PLANT HEAT AND MATERIAL DIAGRAM

RESPONSE TO DATA REQUESTS
MARCH 8, 2001



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the imagine·build company™ BLACK & VEATCH Corporation

PLANT HEAT AND MATERIAL DIAGRAM

EL SEGUNDO POWER REDEVELOPMENT PROJECT

B&V Project Number
98496.0100

Figure 5.19-1 (Sheet 1 of 6)

El Segundo
Unit 1&2 Power Redevelopment
Overall Combined Cycle Performance Estimate
Figure 5.19-1 (Sheet 2 of 6)

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3/27/01
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Case Name	Case 1	Case 2	Case 3	Case 4	Case 5
Case Description	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters On Inlet Cooling System On Once Through Condenser Model Steam Injection On from Main Steam Duct Firing On	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System Off Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On/Off Once Through Condenser Model Steam Injection Off Duct Firing Off
Ambient Temperature	83 F	83 F	83 F	83 F	83 F
Number of CTG/HRSG Units Operating	2	2	1	1	2
CTG Model	GE7241(FA)	GE7241(FA)	GE7241(FA)	GE7241(FA)	GE7241(FA)
CTG Fuel	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas
CTG Load Level (percent of base load)	100.00%	100.00%	100.00%	50.00%	100.00%
CTG Evaporative Cooler	Evap On	Evap On	Evap On	Evap Off	Evap Off
HRSG Firing	Unfired	Fired	Unfired	Unfired	Unfired
STG Output	188.9 MW	288.4 MW	91.5 MW	63.6 MW	163.4 MW
STG Throttle Conditions, psia/F	1105P/1041T	1826P/1050T	1000P/1045T	1000P/1050T	1000P/1050T
STG Hot Reheat Conditions, psia/F	311P/1041T	506P/1050T	160P/1042T	118P/1050T	271P/1050T
Condenser Pressure	1.48 in HgA	1.78 in HgA	1 in HgA	1 in HgA	1.32 in HgA

New & Clean Performance per Block

Number of CTG/HRSG Units Operating	2	2	1	1	2
Gross CTG #1 Output, kW (each)	162,500	179,400	162,500	77,500	162,500
Gross CTG #2 Output, kW (each)	162,500	179,400	N/A	N/A	77,500
Gross CTG Output, kW (total)	325,000	358,800	162,500	77,500	240,000
Gross CTG Heat Rate, Btu/kWh (LHV)	9,505.0	9,096.0	9,505.0	12,558.8	10,488.3
Gross CTG Heat Rate, Btu/kWh (HHV)	10,556.4	10,102.2	10,556.4	13,948.0	11,648.5
CTG Heat Input, MBtu/h (LHV) (total)	3,089.1	3,263.6	1,544.6	973.3	2,517.2
CTG Heat Input, MBtu/h (HHV) (total)	3,430.8	3,624.7	1,715.4	1,081.0	2,795.6
Duct Burner Heat Input, MBtu/h (LHV) (each)	0.0	540.5	0.0	0.0	0.0
Duct Burner Heat Input, MBtu/h (LHV) (total)	0.0	1,081.0	0.0	0.0	0.0
Gross STG Output, kW	188,880	288,390	91,500	63,570	163,360
Gross Plant Output, kW	513,880	647,190	254,000	141,070	403,360
Gross Cycle Heat Rate, Btu/kWh (LHV)	6,011	6,713	6,081	6,899	6,241
Gross Cycle Heat Rate, Btu/kWh (HHV)	6,676	7,456	6,754	7,663	6,931
Auxiliary Power/Losses, kW	12,710	15,730	9,610	8,630	12,150
Auxiliary Power/Losses, percent of gross	2.47%	2.43%	3.78%	6.12%	3.01%
Block Heat Input, MBtu/h (LHV)	3,089.1	4,344.6	1,544.6	972.6	2,517.2
Block Heat Input, MBtu/h (HHV)	3,430.8	4,825.3	1,715.4	1,080.2	2,795.6
Net Block Output, kW	501,170	631,460	244,390	132,440	391,210
Net Block Heat Rate, Btu/kWh (LHV)	6,164	6,880	6,320	7,344	6,434
Net Block Heat Rate, Btu/kWh (HHV)	6,846	7,641	7,019	8,156	7,146
Net Block Efficiency (LHV)	55.36%	49.59%	53.99%	46.46%	53.03%
Net Block Efficiency (HHV)	49.84%	44.65%	48.61%	41.83%	47.75%

Notes:

1. The combustion turbine generator (CTG) performance was estimated by Cycledeck, and GTPE, two General Electric performance estimating programs. A steam injected CTG performance is based on a B&V estimate.
2. Supplementally fired cases are fired to maximum allowed duct burner exit gas temperature or maximum steam turbine throttle pressure, whichever occurs first.
3. The heat rejection system is limited by duty.
4. The auxiliary cooling duty was assumed to be 7.5% of the total heat rejection duty
5. No boiler feed pump efficiency curves were used and BFP outlet pressure was assumed to be constant.
6. Maximum steam turbine throttle pressure was assumed to be 1905 psia.
7. Maximum pressure requirements for steam injection are 360 psig and minimum temperature requirement is 650 F.
8. 1% Blowdown is assumed for HP & IP drums.
9. The steam turbine performance is based on a typical GE steam turbine.
10. Deaeration occurs within the condenser. A make up water deaerator is required due to steam injection.
11. Cycle make up water has a temperature of 59F.
12. The steam extracted for power augmentation was extracted from HP steam.
13. This performance is an estimate and can not be guaranteed.

El Segundo
Unit 1&2 Power Redevelopment
Overall Combined Cycle Performance Estimate
Figure 5.19-1 (Sheet 3 of 6)

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Case Name			Case 1	Case 2	Case 3	Case 4	Case 5
Case Description			Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters On Inlet Cooling System On Once Through Condenser Model Steam Injection On from Main Steam Duct Firing On	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System Off Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On/Off Once Through Condenser Model Steam Injection Off Duct Firing Off
	Ambient Temperature		83 F	83 F	83 F	83 F	83 F
	Number of CTG/HRSG Units Operating		2	2	1	1	2
	CTG Model		GE7241(FA)	GE7241(FA)	GE7241(FA)	GE7241(FA)	GE7241(FA)
	CTG Fuel		Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas
	CTG Load Level (percent of base load)		100.00%	100.00%	100.00%	50.00%	100.00%
	CTG Evaporative Cooler		Evap On	Evap On	Evap On	Evap Off	Evap Off
	HRSG Firing		Unfired	Fired	Unfired	Unfired	Unfired
	STG Output		188.9 MW	288.4 MW	91.5 MW	63.6 MW	163.4 MW
	STG Throttle Conditions, psia/F		1105P/1041T	1826P/1050T	1000P/1045T	1000P/1050T	1000P/1050T
	STG Hot Reheat Conditions, psia/F		311P/1041T	506P/1050T	160P/1042T	118P/1050T	271P/1050T
	Condenser Pressure		1.48 in HgA	1.78 in HgA	1 in HgA	1 in HgA	1.32 in HgA
Combustion Turbine Generator #1							
	Ambient Conditions	Pressure, psia	14.7	14.7	14.7	14.7	14.7
		Temperature, F	83	83	83	83	83
		Relative Humidity	47.00%	47.00%	47.00%	47.00%	47.00%
	Compressor Inlet Conditions	Temperature, F	70.38	70.38	70.38	83.00	70.38
		Relative Humidity	89.47%	89.47%	89.47%	47.00%	89.47%
	Evaporative Cooler Used?		Evap On	Evap On	Evap On	Evap Off	Evap On
	Fuel Flow	Flowrate, lb/h	71,790	75,850	71,790	45,210	71,790
	CTG Fuel Input	HC MBtu/h, LHV	1544.6	1631.8	1544.6	972.6	1544.6
		HC MBtu/h, HHV	1715.4	1812.3	1715.4	1080.2	1715.4
		Fuel Type	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas
	Performance Basis Temperature, F		365	365	365	365	365
	Steam Injection	Flowrate, lb/h	0	115,510	0	0	0
	CTG Exhaust	Flowrate, lb/h	3,484,000	3,602,000	3,484,000	2,320,000	3,484,000
		Pressure, in H2O	14.22	14.2	14.22	6.48	14.22
		Temperature, F	1,136.00	1,121.00	1,136.00	1,200.00	1,136.00
	Generator Gross Output, Kw (each)		162,500	179,400	162,500	77,500	162,500
Combustion Turbine Generator #2							
	Ambient Conditions	Pressure, psia	14.7	14.7	N/A	N/A	14.7
		Temperature, F	83	83	N/A	N/A	83
		Relative Humidity	47.00%	47.00%	N/A	N/A	47.00%
	Compressor Inlet Conditions	Temperature, F	70.38	70.38	N/A	N/A	83.00
		Relative Humidity	89.47%	89.47%	N/A	N/A	47.00%
	Evaporative Cooler Used?		Evap On	Evap On	N/A	N/A	Evap Off
	Fuel Flow	Flowrate, lb/h	71,790	75,850	N/A	N/A	45,210
	CTG Fuel Input	HC MBtu/h, LHV	1544.6	1631.8	N/A	N/A	972.6
		HC MBtu/h, HHV	1715.4	1812.3	N/A	N/A	1080.2
		Fuel Type	Natural Gas	Natural Gas	N/A	N/A	Natural Gas
	Performance Basis Temperature, F		365	365	N/A	N/A	365
	Steam Injection	Flowrate, lb/h	0	115,510	N/A	N/A	0
	CTG Exhaust	Flowrate, lb/h	3,484,000	3,602,000	N/A	N/A	2,320,000
		Pressure, in H2O	14.22	14.2	N/A	N/A	14.22
		Temperature, F	1,136.00	1,121.00	N/A	N/A	1,200.00
	Generator Gross Output, Kw (each)		162,500	179,400	N/A	N/A	77,500

El Segundo
Unit 1&2 Power Redevelopment
Overall Combined Cycle Performance Estimate
Figure 5.19-1 (Sheet 4 of 6)

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Case Name			Case 1	Case 2	Case 3	Case 4	Case 5
Case Description			Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters On Inlet Cooling System On Once Through Condenser Model Steam Injection On from Main Steam Duct Firing On	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System Off Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On/Off Once Through Condenser Model Steam Injection Off Duct Firing Off
	Ambient Temperature		83 F	83 F	83 F	83 F	83 F
	Number of CTG/HRSG Units Operating		2	2	1	1	2
	CTG Model		GE7241(FA)	GE7241(FA)	GE7241(FA)	GE7241(FA)	GE7241(FA)
	CTG Fuel		Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas
	CTG Load Level (percent of base load)		100.00%	100.00%	100.00%	50.00%	100.00%
	CTG Evaporative Cooler		Evap On	Evap On	Evap On	Evap Off	Evap Off
	HRSG Firing		Unfired	Fired	Unfired	Unfired	Unfired
	STG Output		188.9 MW	288.4 MW	91.5 MW	63.6 MW	163.4 MW
	STG Throttle Conditions, psia/F		1105P/1041T	1826P/1050T	1000P/1045T	1000P/1050T	1000P/1050T
	STG Hot Reheat Conditions, psia/F		311P/1041T	506P/1050T	160P/1042T	118P/1050T	271P/1050T
	Condenser Pressure		1.48 in HgA	1.78 in HgA	1 in HgA	1 in HgA	1.32 in HgA
Heat Recovery Steam Generator #1							
	HRSG HP Steam	Flowrate, lb/h	435,395	827,305	438,211	311,142	441,698
	(after NRV)	Pressure, psia	1,150.30	1,907.60	1,025.50	1,012.90	1,041.90
		Temperature, F	1,044.20	1,054.80	1,047.00	1,051.60	1,020.90
		Enthalpy, Btu/lb	1,526.20	1,511.08	1,531.31	1,534.23	1,516.06
	HP Steam Desuperheating Spray	Flowrate, lb/h	0	10,844	0	20,748	10,528
	HRSG Hot Reheat Steam	Flowrate, lb/h	479,937	782,080	491,534	361,718	486,028
	(after NRV)	Pressure, psia	319.4	520.1	170.2	125.6	280
		Temperature, F	1,042.80	1,051.90	1,045.00	1,052.40	1,026.70
		Enthalpy, Btu/lb	1,548.33	1,547.80	1,553.58	1,558.66	1,540.90
	Cold Reheat Steam from STG	Flowrate, lb/h	425,823	711,797	428,046	303,934	425,820
		Pressure, psia	345.2	586.6	197.3	139.9	306.2
		Temperature, F	732	738.8	756	754.6	745.7
		Enthalpy, Btu/lb	1,383.48	1,374.74	1,403.09	1,405.01	1,392.61
	IP FW to Fuel Gas Heat Exchanger	Flowrate, lb/h	41,674	37,718	49,671	32,937	43,392
	(from IP EC exit)	Temperature, F	427.6	472.1	383.3	351.8	416.9
		Enthalpy, Btu/lb	405.65	455.47	357.72	324.57	393.86
	LP Steam	Flowrate, lb/h	53,549	0	48,485	28,400	51,202
	(after NRV)	Pressure, psia	58.7	67.2	30.7	21.5	50.3
		Temperature, F	557.1	300.2	549.5	544.5	550
		Enthalpy, Btu/lb	1,311.33	1,179.79	1,309.74	1,308.08	1,308.51
	Condensate to LP Economizer	Flowrate, lb/h	749,871	0	872,521	709,193	791,427
		Pressure, psia	250	250	250	250	250
		Temperature, F	140	235.7	140	140.1	140
		Enthalpy, Btu/lb	108.55	204.63	108.61	108.68	108.6
	Stack Exhaust	Temperature, F	200.5	336.9	183.6	163.7	194.8
Heat Recovery Steam Generator #2							
	HRSG HP Steam	Flowrate, lb/h	435,395	827,305	N/A	N/A	310,832
	(after NRV)	Pressure, psia	1,150.30	1,907.60	N/A	N/A	1,033.80
		Temperature, F	1,044.20	1,054.80	N/A	N/A	1,096.20
		Enthalpy, Btu/lb	1,526.20	1,511.08	N/A	N/A	1,558.92
	HP Steam Desuperheating Spray	Flowrate, lb/h	0	10,844	N/A	N/A	6,771
	HRSG Hot Reheat Steam	Flowrate, lb/h	479,937	782,080	N/A	N/A	348,972
	(after NRV)	Pressure, psia	319.4	520.1	N/A	N/A	278
		Temperature, F	1,042.80	1,051.90	N/A	N/A	1,083.90
		Enthalpy, Btu/lb	1,548.33	1,547.80	N/A	N/A	1,571.37
	Cold Reheat Steam from STG	Flowrate, lb/h	425,823	711,797	N/A	N/A	310,028
		Pressure, psia	345.2	586.6	N/A	N/A	307.6
		Temperature, F	732	738.8	N/A	N/A	745.8
		Enthalpy, Btu/lb	1,383.48	1,374.74	N/A	N/A	1,392.63
	IP FW to Fuel Gas Heat Exchanger	Flowrate, lb/h	41,674	37,718	N/A	N/A	47,815
	(from IP EC exit)	Temperature, F	427.6	472.1	N/A	N/A	392.3
		Enthalpy, Btu/lb	405.65	455.47	N/A	N/A	367.42
	LP Steam	Flowrate, lb/h	53,549	0	N/A	N/A	28,829
	(after NRV)	Pressure, psia	58.7	67.2	N/A	N/A	49.4
		Temperature, F	557.1	300.2	N/A	N/A	551.4
		Enthalpy, Btu/lb	1,311.33	1,179.79	N/A	N/A	1,309.23
	Condensate to LP Economizer	Flowrate, lb/h	749,871	0	N/A	N/A	579,459
		Pressure, psia	250	250	N/A	N/A	250
		Temperature, F	140	235.7	N/A	N/A	140.1
		Enthalpy, Btu/lb	108.55	204.63	N/A	N/A	108.65
	Stack Exhaust	Temperature, F	200.5	336.9	N/A	N/A	179.3

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Unit 1&2 Power Redevelopment — 3/27/01
Overall Combined Cycle Performance Estimate — JFR
Figure 5.19-1 (Sheet 5 of 6)

Case Name		Case 1	Case 2	Case 3	Case 4	Case 5
Case Description		Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters On Inlet Cooling System On Once Through Condenser Model Steam Injection On from Main Steam Duct Firing On	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System Off Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On/Off Once Through Condenser Model Steam Injection Off Duct Firing Off
Ambient Temperature		83 F	83 F	83 F	83 F	83 F
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CTG Model		GE7241(FA)	GE7241(FA)	GE7241(FA)	GE7241(FA)	GE7241(FA)
CTG Fuel		Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas
CTG Load Level (percent of base load)		100.00%	100.00%	100.00%	50.00%	100.00%
CTG Evaporative Cooler		Evap On	Evap On	Evap On	Evap Off	Evap Off
HRSG Firing		Unfired	Fired	Unfired	Unfired	Unfired
STG Output		188.9 MW	288.4 MW	91.5 MW	63.6 MW	163.4 MW
STG Throttle Conditions, psia/F		1105P/1041T	1826P/1050T	1000P/1045T	1000P/1050T	1000P/1050T
STG Hot Reheat Conditions, psia/F		311P/1041T	506P/1050T	160P/1042T	118P/1050T	271P/1050T
Condenser Pressure		1.48 in HgA	1.78 in HgA	1 in HgA	1 in HgA	1.32 in HgA
Main Steam Throttle Conditions	Flowrate, lb/h	870,790	1,455,950	438,211	311,142	752,530
	Pressure, psia	1,105.30	1,826.10	1,000.00	1,000.00	1,000.00
	Temperature, F	1,040.90	1,050.10	1,044.80	1,050.00	1,050.00
	Enthalpy, Btu/lb	1,525.63	1,510.50	1,530.79	1,533.72	1,533.70
Cold Reheat Steam	Flowrate, lb/h	859,912	1,437,762	432,737	307,256	743,130
	Pressure, psia	354.9	602.3	205.1	145.5	315.2
	Temperature, F	733.5	740.7	757.4	755.8	746.7
	Enthalpy, Btu/lb	1,383.77	1,375.01	1,403.43	1,405.36	1,392.70
Hot Reheat Steam	Flowrate, lb/h	959,875	1,564,161	491,534	361,718	834,999
	Pressure, psia	310.7	506	159.7	117.8	271.3
	Temperature, F	1,041.20	1,050.10	1,042.40	1,049.90	1,050.10
	Enthalpy, Btu/lb	1,547.73	1,547.19	1,552.49	1,557.56	1,553.52
IPT Throttle Steam	Flowrate, lb/h	959,875	1,564,161	491,534	361,718	834,999
	Pressure, psia	310.7	506	159.7	117.8	271.3
	Temperature, F	1,041.20	1,050.10	1,042.40	1,049.90	1,050.10
	Enthalpy, Btu/lb	1,547.73	1,547.19	1,552.49	1,557.56	1,553.52
LP Admission Steam (From HRSG)	Flowrate, lb/h	107,098	0	48,485	28,400	80,031
	Pressure, psia	56	67.2	28.1	20.3	48
	Temperature, F	555.5	300.2	547.4	543	550.1
	Enthalpy, Btu/lb	1,310.75	1,179.29	1,308.96	1,307.45	1,308.71
LP Turbine Exhaust	Flowrate, lb/h	1,083,786	1,356,108	549,023	396,491	929,723
	Pressure, psia	0.729	0.874	0.491	0.491	0.649
	Pressure, in HgA	1.484	1.779	1	1	1.321
	Temperature, F	91.4	97.3	79	79	87.7
ELEP	Enthalpy, Btu/lb	1,022.20	1,007.36	1,038.24	1,056.01	1,025.29
UEEP	Enthalpy, Btu/lb	1,028.96	1,014.68	1,043.03	1,066.66	1,031.34
Exhaust Loss	Enthalpy, Btu/lb	6.76	7.32	4.79	10.65	6.05
Generator	Gross Output, kW	188880	288390	91500	63570	163360
Condenser Duty	Heat Duty,MBtu/h	1,052.76	1,283.04	547.51	404.57	908.68
	MW	308.53	376.02	160.46	118.57	266.31
Aux Cooling Duty	MW	25.02	30.49	13.01	9.61	21.59
Total Heat Rejction Duty	MW	333.55	406.51	173.47	128.18	287.90
Total Circulating Water from Ocean	Flowrate, lb/h	73,666,840	73,666,840	73,666,840	73,666,840	73,666,840
	Temperature, F	64.4	64.4	64.4	64.4	64.4
Circulating Water to Condenser	Flowrate, lb/h	68,141,828	68,141,828	68,141,828	68,141,828	68,141,828
	Temperature, F	64.4	64.4	64.4	64.4	64.4
Circulating Water from Condenser	Flowrate, lb/h	68,141,828	68,141,828	68,141,828	68,141,828	68,141,828
	Temperature, F	79.89	83.28	72.8	70.6	77.77
Total Circulating Water Return to Ocean	Flowrate, lb/h	73,666,840	73,666,840	73,666,840	73,666,840	73,666,840
	Temperature, F	79.9	83.3	72.8	70.6	77.8
Total Circulating Water	Mgpd	207	207	207	207	207
Cooling Range	Temperature, F	15.49	18.88	8.4	6.2	13.37

El Segundo
Unit 1&2 Power Redevelopment
Overall Combined Cycle Performance Estimate
Figure 5.19-1 (Sheet 6 of 6)

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Case Name		Case 1	Case 2	Case 3	Case 4	Case 5
Case Description		Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters On Inlet Cooling System On Once Through Condenser Model Steam Injection On from Main Steam Duct Firing On	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System Off Once Through Condenser Model Steam Injection Off Duct Firing Off	Hot Summer Day Off Design Feedwater Heaters Off Inlet Cooling System On/Off Once Through Condenser Model Steam Injection Off Duct Firing Off
Ambient Temperature		83 F	83 F	83 F	83 F	83 F
Number of CTG/HRSG Units Operating		2	2	1	1	2
CTG Model		GE7241(FA)	GE7241(FA)	GE7241(FA)	GE7241(FA)	GE7241(FA)
CTG Fuel		Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas
CTG Load Level (percent of base load)		100.00%	100.00%	100.00%	50.00%	100.00%
CTG Evaporative Cooler		Evap On	Evap On	Evap On	Evap Off	Evap Off
HRSG Firing		Unfired	Fired	Unfired	Unfired	Unfired
STG Output		188.9 MW	288.4 MW	91.5 MW	63.6 MW	163.4 MW
STG Throttle Conditions, psia/F		1105P/1041T	1826P/1050T	1000P/1045T	1000P/1050T	1000P/1050T
STG Hot Reheat Conditions, psia/F		311P/1041T	506P/1050T	160P/1042T	118P/1050T	271P/1050T
Condenser Pressure		1.48 in HgA	1.78 in HgA	1 in HgA	1 in HgA	1.32 in HgA
Feedwater Heaters						
Drain Cooler Water Inlet	Flowrate, lb/h	Feedwater Heater Out of Service	1,844,877	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	97.9	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Drain Cooler Water Outlet	Flowrate, lb/h	Feedwater Heater Out of Service	1,844,877	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	108.8	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Deaerator Drain Inlet	Flowrate, lb/h	Feedwater Heater Out of Service	236,950	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	187.8	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Deaerator Drain Outlet	Flowrate, lb/h	Feedwater Heater Out of Service	236,950	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	102.9	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Drain Cooler Duty	Heat Duty,MBtu/	Feedwater Heater Out of Service	20.13	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Feedwater Heater Water #1 Inlet	Flowrate, lb/h	Feedwater Heater Out of Service	1,844,877	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	108.8	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Feedwater Heater Water #1 Outlet	Flowrate, lb/h	Feedwater Heater Out of Service	1,844,877	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	182.8	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Feedwater Heater #1 Steam Inlet	Flowrate, lb/h	Feedwater Heater Out of Service	137,838	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	188.85	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Feedwater Heater #1 Drain Outlet	Flowrate, lb/h	Feedwater Heater Out of Service	236,950	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	187.8	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Feedwater Heater #1 Duty	Mbtu/h	Feedwater Heater Out of Service	136.39	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Feedwater Heater #2 Water Inlet	Flowrate, lb/h	Feedwater Heater Out of Service	1,844,877	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	182.8	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Feedwater Heater #2 Water Outlet	Flowrate, lb/h	Feedwater Heater Out of Service	1,844,877	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	239.6	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Feedwater Heater #2 Steam Inlet	Flowrate, lb/h	Feedwater Heater Out of Service	99,112	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	372.75	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Feedwater Heater #2 Drain Outlet	Flowrate, lb/h	Feedwater Heater Out of Service	99,112	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
	Temperature, F	Feedwater Heater Out of Service	192.8	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Feedwater Heater #2 Duty	Mbtu/h	Feedwater Heater Out of Service	105.47	Feedwater Heater Out of Service	Feedwater Heater Out of Service	Feedwater Heater Out of Service
Miscellaneous						
IP BFP #1 Suction	Flowrate, lb/h	536,129	960,156	556,438	405,270	550,199
	Pressure, psia	99.6	91.1	69	50.9	89.8
	Temperature, F	308.4	300.2	274.1	243	298.9
	Enthalpy, Btu/lb	278.44	270.03	243.27	211.56	268.71
IP BFP #1 Discharge	Flowrate, lb/h	536,129	960,156	556,438	405,270	550,199
	Pressure, psia	700.00	700.00	700.00	700.00	700.00
	Temperature, F	309.6	301.4	275.3	244	300.1
	Enthalpy, Btu/lb	280.75	272.37	245.66	213.98	271.05
HP BFP #1 Suction	Flowrate, lb/h	439,793	835,552	442,637	314,075	446,054
	Pressure, psia	700.00	700.00	700.00	700.00	700.00
	Temperature, F	309.6	301.4	275.3	244	300.1
	Enthalpy, Btu/lb	280.75	272.37	245.66	213.98	271.05
HP BFP #1 Discharge	Flowrate, lb/h	439,793	835,552	442,637	314,075	446,054
	Pressure, psia	2,300.00	2,300.00	2,300.00	2,300.00	2,300.00
	Temperature, F	312.7	304.5	278.1	246.6	303.2
	Enthalpy, Btu/lb	286.92	278.51	251.72	219.95	277.19
IP BFP #2 Suction	Flowrate, lb/h	536,129	960,156	N/A	N/A	401,001
	Pressure, psia	99.6	91.1	N/A	N/A	78.4
	Temperature, F	308.4	300.2	N/A	N/A	286.3
	Enthalpy, Btu/lb	278.44	270.03	N/A	N/A	255.75
IP BFP #2 Discharge	Flowrate, lb/h	536,129	960,156	N/A	N/A	401,001
	Pressure, psia	700.00	700.00	N/A	N/A	700.00
	Temperature, F	309.6	301.4	N/A	N/A	287.5
	Enthalpy, Btu/lb	280.75	272.37	N/A	N/A	258.12
HP BFP #2 Suction	Flowrate, lb/h	439,793	835,552	N/A	N/A	313,903
	Pressure, psia	700.00	700.00	N/A	N/A	700.00
	Temperature, F	309.6	301.4	N/A	N/A	287.5
	Enthalpy, Btu/lb	280.75	272.37	N/A	N/A	258.12
HP BFP #2 Discharge	Flowrate, lb/h	439,793	835,552	N/A	N/A	313,903
	Pressure, psia	2,300.00	2,300.00	N/A	N/A	2,300.00
	Temperature, F	312.7	304.5	N/A	N/A	290.4
	Enthalpy, Btu/lb	286.92	278.51	N/A	N/A	264.21
HP Evaporator Blowdown #1	Flowrate, lb/h	4,398	8,247	4,426	2,933	4,355
IP Evaporator Blowdown #1	Flowrate, lb/h	547	423	641	474	546
LP Evaporator Blowdown #1	Flowrate, lb/h	0	0	0	0	0
HP Evaporator Blowdown #2	Flowrate, lb/h	4,398	8,247	N/A	N/A	3,071
IP Evaporator Blowdown #2	Flowrate, lb/h	547	423	N/A	N/A	339
LP Evaporator Blowdown #2	Flowrate, lb/h	0	0	N/A	N/A	0
Cycle Make Up Water (total for all units)	Flowrate, lb/h	9,889	248,359	5,068	3,407	8,312
	Temperature, F	59	59	59	59	59